



Vol. 53

April 2003

No. 4

Battle of the Beams (Pt II) (by VO1NO)

[Editor's note: Al VO1NO spoke about The Battle of The Beams at the November meeting. Unfortunately, he ran out of time. For those who missed the talk in November, here is the second of three parts. The conclusion will be presented at this month's meeting.]

X-Gerate

In mid-August 1940 the German Luftwaffe began an all out bombardment of Britain. On the 13th of that month twenty-one bombers attacked a Spitfire factory near Birmingham. What alarmed the Royal Air Force was the accuracy of the raid – despite the Aspirin jammers to confuse the Knickenbein system, eleven bombs struck the plant itself. Up to this point, Dr. Jones had hoped that Knickenbein and the X-Gerate, German for X, or secret, Apparatus, were one and the same. By early September he knew that X-Gerate was a new bombing aid.

In late August the British monitoring service detected German transmissions at 74 MHz. The signals were similar to the Knickenbein in some ways, and appeared to originate from the Calais and Le Havre regions. Because no known Luftwaffe receivers operated on 74 MHz, the British first concluded that the signals were intended for the navigation of minelayers or motor torpedo boats. Enemy messages decoded in September revealed their true purpose in great detail, including testing results, transmitter names and locations, and the method of operation. Based on this information, Dr. Jones was able to estimate that X-Gerate had an accuracy of 25 feet at 100 miles. The beams, codenamed “River” by the British, were usable only by aircraft of

Kampfgruppe 100. This was due to the requirement for special equipment and training to bomb accurately with X-Gerate. The system worked as follows (see Figure One). Heinkel 111 bombers of Kampfgruppe 100 would launch from Brittany in occupied France, and fly to Cherbourg to intercept the coarse beam. Superimposed on this coarse beam was a very fine beam codenamed “Wesser”. The coarse beam was easy to find and permitted the pilot to gradually ease into the fine beam, only 20 – 30 feet wide. The beams were similar in operation to Knickenbein, but were not monitored by ear. Instead, a “kicking meter” was used to indicate if the aircraft was left or right of the equi-signal. The pilot monitored this, and was also responsible for maintaining a given altitude.

The observer (bomb aimer) had a separate receiver tuned to the crossbeams from Calais. He also had a visual “kicking meter” and a bombing computer that resembled a large clock (see Figure Two). On intercepting the first crossbeam, codenamed Rhein, the pilot ensured that he remained in the fine beam. On intercepting the second cross-beam (Oder), the observer started the clock. The aircraft was now 30 kilometers away from the target. At 15 kilometers the final crossbeam, Elbe, was intercepted. The observer pressed a control lever on the bombing computer, thereby enabling the computer to determine a very accurate ground speed. It used this to determine when to release the bomb load. This was done automatically. Accuracy was about 90 meters at 300 kilometers, the most precise system of blind bombing developed till then.

MEETING LOCATION: EL PASO COUNTY OEM, 305 S UNION BLVD
April Program: Battle of the Beams Pt III by Al VO1NO

Meetings

Our monthly meetings are held on the 2nd Wednesday of each month at 7 pm, temporarily at the El Paso County Office of Emergency Management, 305 S Union Blvd. Our Annual meeting is in October. Check the web site for any changes.

Regular License Exam Sessions

Our ARRL VEC test sessions are on the 2nd Saturday of even numbered months at 0900 at the DeVry Institute annex, 3245 International Cr, just east of Memorial Park, but west of Printers Parkway. Contact Erik KGØXE for details.

Examinees need to bring (1) \$12, preferably a check or money order payable to ARRL/VE; (2) picture ID; (3) the signed original and a copy of your current amateur radio license and CSEs you have (we keep the copies); and (4) a pen, pencil, and calculator if needed. Memory calculators will be checked.

PPRAA Web Page See it at <http://www.qsl.net/ppraa/>.

Thanks to Lee Inman KØQED for maintaining these pages.

Get on the PPRAA E-mail

Reflector Stay on top of new or short-fused developments. Subscribe at

<http://mailman.qth.net/mailman/listinfo/ppraanet>.

Thanks to John Wishart KCØJFH for maintaining this list.

PPRAA Simplex Net

All amateurs are invited to join us on Thursday evenings at 1900 on 146.58 MHz simplex for our club net. Get the latest club and regional happenings!

Officers and Directors

President	Ben Cruise	NØLNW		n0lnw@arrl.net
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*Board Member	Aaron Pelouze	KD6FLM		
Board Member	Jerry VerDuft	ADØA		verduftj@earthlink.net
Ø-Beat Editor	Tom Dawson	KCØNRZ		tom@dawsons.us

* Indicates this Director is in the 2nd year of a two-year term

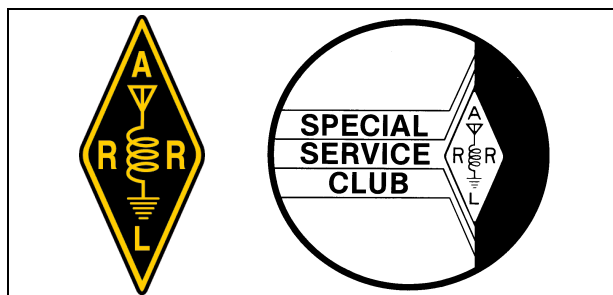
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RACES Officer	Les Borst	KCØNC	575-8400	kc0nc@worldnet.att.net

Upcoming Club Programs

Apr..... Battle of the Beams Pt III

May.....



Articles for the Ø-Beat Deadline for articles or ads for the May issue is Apr 28. Submit articles by e-mail, US Mail, telephone or in person to the editor. Editor reserves right to edit for readability, grammar, spelling, punctuation and length.

Nonprofit Organization The PPRAA is a federal 501(c)(3) nonprofit organization and welcomes all contributions. Your contributions/donations may be tax-deductible.

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Club and Local News

President's Corner

By NØLNW Ben Cruise, President

The big news this month is that Tom Dawson KCØNRZ has agreed to take on the editorship of *Ø-Beat*. I know Tom will do a great job. Thanks again to Rob for an outstanding tenure as editor.

Wes Wilson KØHBZ has announced that he is stepping down as ARES Dist 14 Emergency Coordinator at the end of April. The entire ham community knows of Wes's dedication and excellence in this position. He will be missed.

There are many hams who have taken on the responsibility of filling major positions. These hams serve us all and spend many, many hours doing those things that make our experience in this hobby more enjoyable. These volunteers seek little in the way of recognition or awards. The rest of us owe these volunteers respect and cooperation. We may not always agree with what these leaders do but we must express that disagreement in the proper forum and in a civil manner. The best way to influence what is going on is to get involved.

I continue to be amazed at the number of new licenses being issued each month. The list for our area this month had 20-25 new calls. I would like to see our club have some kind of out-reach to this group. Any ideas? Anyone interested in taking this on as a project? Hit me with some e-mails (NØLNW@arrl.net) and let me know what you think!

Hope to see you all at the meeting. We will be at the County OEM again. 73 de Ben NØLNW

Club Briefs

- Field Day Update! Al has arranged to use the vacant lot on the NE corner of Research Parkway and Austin Bluffs Parkway for this year's Field Day. (Gee, Al, couldn't be any closer to home for me, short of my back yard!) Al Penney VO1NO is our FD coordinator this year. That's June 28-29!
- Hamfest planning meeting is on Sat, May 5 at the COS police station, 7850 Goddard St, and will be on the first Saturday of each month from now on. Kate reports things are going along very smoothly. Kate Muniz KCØEGJ is our hamfest coordinator. 'Fest is June 14!

Battle of the Beams (Continued from Pg 1)

By VO1NO Al Penney

In October 1940 Kampfgruppe 100 introduced another innovation into night bombing. To enable bombers other than the X-Geräte fitted ones to attack accurately at night, the concept of pathfinding was developed. Kampfgruppe 100 bombers would mark targets using incendiary bombs. Other bombers would aim for the resulting fires.

Countermeasures

British countermeasures to X-Geräte took two forms. The first was electronic. A number of army gunlaying radars were modified to jam the coarse and fine beams in the same manner as the Aspirin jammers disrupted the Knickenbein system. These were codenamed "Bromide", an appropriately stronger analgesic than aspirin.

The second was visual. Fires started by the pathfinding aircraft were extinguished as quickly as possible. Meanwhile, fires were started in nearby empty fields in order to fool other bombers into wasting their bombs on false targets. These decoys became quite elaborate as time progressed. They were manned by RAF enlisted personnel who controlled the setups from slit trenches. During one particularly heavy raid the commanding officer of one group called to see how they were. Apparently their comments were not suitable to be recorded in the Squadron History! None of the aircrew so employed were lost during the war however.

The electronic countermeasures appeared to have no effect at first. On the night of 14/15 November 1940 the X-Geräte and pathfinding techniques worked to deadly perfection in a raid on Coventry. More than 500 were killed and 420 injured. The twelve bombers of Kampfgruppe 100 that led the attack did not even realize that they were being jammed. At first the British thought that the Bromide jammers were transmitting on the wrong frequency. There were 20 different channels, and receiver frequency calibration was difficult to maintain in the vibrating, drafty aircraft used to search for the beams every night.

A Tragic Mistake

The jammers were on the correct frequency, but the modulating tone was set at 1500 hertz instead of the required 2000. Unfortunately for the inhabitants of Coventry, the opportunity to discover this had been lost 8 days prior to the raid. A Heinkel 111 of Kampfgruppe 100 had crash-landed on an English beach after running out of fuel. The crew had thought they were over Spain – they were a victim of the British meaconing of the

beacon at St. Malo. A nearby army unit began salvage work on the wreck when a Royal Navy patrol boat arrived. The young commanding officer of the patrol boat insisted on towing the aircraft into deeper water, where it promptly sank. The army eventually got the bomber back up on the beach, but it was not until two weeks after the Coventry attack that the modulation mistake was discovered after a careful examination of the aircraft's equipment.

Eventually enough of the Bromide jammers were produced, on the correct frequency, to interfere with X-Gerate. Postwar analysis showed that the decoy fires and the diversion of Kampfgruppe 100 bombers to other missions were just as important in reducing the effectiveness of X-Gerate in the Luftwaffe's night bombing campaign.

[Interested in the conclusion of "The Battle of The Beams"? Then you will have to attend the next meeting of the Pikes Peak Radio Amateur Association to hear Al VOINO describe how the British, under Dr. R.V. Jones, outwitted the next technological innovation of the German Luftwaffe!]

Membership Report

By KCØNC Les Borst, Membership Chair

Please Welcome These New Members

CADET AMATEUR RADIO CLUB, USAFA	KOMIC
STEVE DUBAY	CITY OEM
WALT STINSON	WØCP

Total Number of Members

153

Ø-Beat Changing Hands (Finally!)

By N7LV Rob Roller

Well, it's time. Time for this chapter of the Ø-Beat history to end, and another chapter to begin. Beginning next month, Tom Dawson KCØNRZ will take over as editor, and take the Ø-Beat to new heights. Thanks, Tom! For those of you that don't know, I've been on the board WAAAYYY too long.

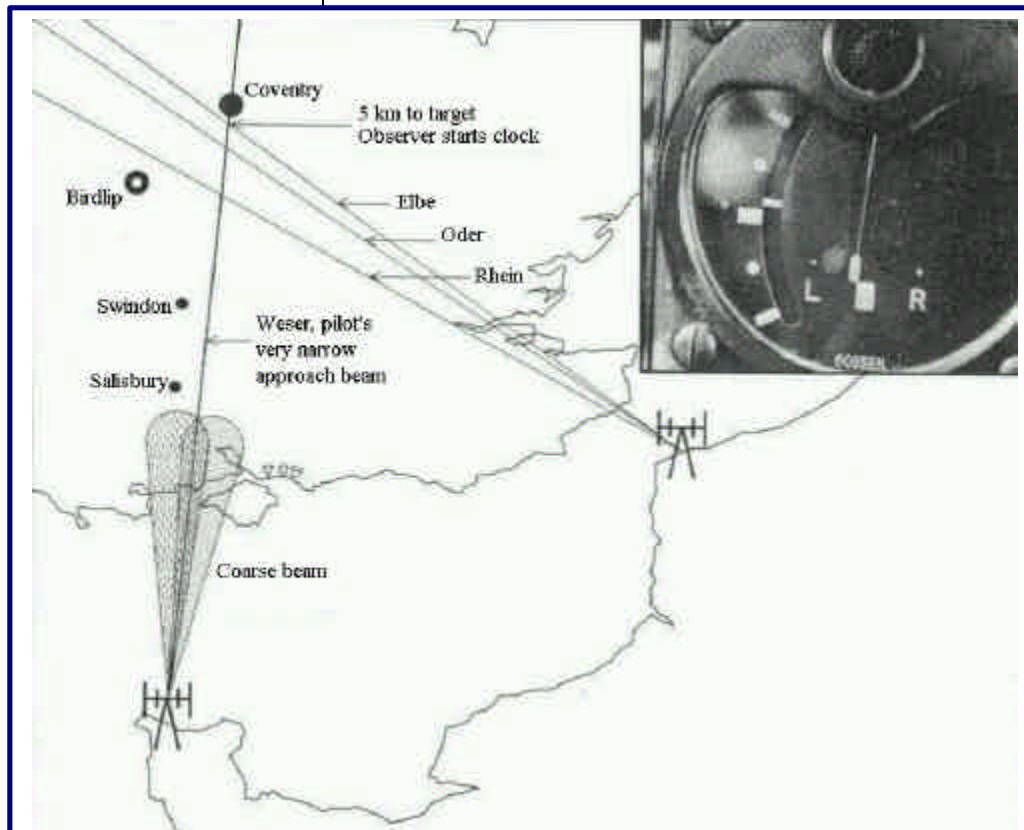


Fig 1: The German X-Gerate precision bombing system, with the kicking meter in the inset.

I joined the board as president in Oct 1995, and after serving for one year, took over as club treasurer for four years until Oct 2000. My role as Ø-Beat editor actually began with the February 2000 issue, and overlapped with my treasurer's duties for the months remaining until Ron NKØP took over as treasurer. This was a total of just over 7 ½ years on the board! Like I said: WAAAYYY too long! It's interesting that as each editor takes over, each has the freedom to do what he or she feels is in the best interests of the club. As it happened, about the time I took over is about the time that we were just getting into discussing making the Ø-Beat available electronically. With the Feb 2000 issue, we came into the electronic age by producing the Ø-Beat in PDF form so it could be e-mailed to our members. The advantage of this new form is that the Ø-Beat is in color! I began with this issue with trying to include several photos in each issue. Along with the PDF form came a choice by the club to post the Ø-Beat on the web. Our webmaster made that happen. I also put together the first-ever historical CD-ROM of Ø-Beats covering January 1980 thru Dec 1999 (which is still available if anyone wants

one!) I hope that everything I've done with the *Ø-Beat* has had a positive effect on the club, and wish all the best to Tom with "his" *Ø-Beat*.

As a sideline, I thought I'd take some space to acknowledge some of the past *Ø-Beat* editors to give you all an idea who has provided us with info over the years, each of whom has built on past editors' work to make it what it is today: Most recently, just before me were Jeff and Renay Boyes NØJLH and KAØROY, Bill Pierce KDØJU, Ron Deutsch NKØP, Mike and Kathie Martin NØOCZ and NØYTQ, Chris Smith NXØE, Keith Goobie NYØT, Phil Somers VE1ARC, Frank Drake KL7IPV, Don Lohse KBØKQ, Dave Allen WBØTAQ, Jim Colvin NØAVY, Charles Smith WAØZZS, Michael Payne WØLVJ, Wayne Brown W2TPV, and Frank Craw WØHWH.

General Club Meeting Minutes, Mar 12, 2003

By KCØGMI Joanie VerDuft, Secretary

Meeting was called to order at 7pm by President Ben

Cruise NØLNW, followed by introductions around the room. Thirty members were in attendance. The February meeting minutes were approved. KBØB gave the Treasurer's report: total cash and bank account balance is \$5404.02 with inflows of \$536, and outflows of \$891.94. Ben announced that Rob N7LV was the new President of the PPFMA. Congratulations Rob! Ben also solicited for a new *Ø-Beat* editor to relieve Rob who has served as editor for quite a few years. Anyone interested should contact N7LV directly. Committee Reports: E-mail reflector manager KCØJFH reported 139 members and 29 posts as of Feb 29th. KCØEGJ reported that the Hamfest Committee is seeking door prize donors and the next Hamfest Committee meeting is April 5th. NØABC noted that the next club sponsored VE testing will be April 12th. N7LV reported on ARES activities for Wes KØHBZ: Skywarn training scheduled for March 29th – contact K4ARM. ARES basic training is scheduled for April 12th, 8am-2pm at the OEM Conference room – contact NØMIK. Ben noted that everyone (any age) is welcome to participate in ARES, not just the graybeards! Field Day Planning: Al VOINO reported that he may be getting us a FD site at Liberty High School but it is not yet confirmed (the letter to the

AF Academy requesting a site there is not yet answered.) Al has all his band captains except for VHF/UHF; NØMUD volunteered for UHF/VHF. Kate KCØEGJ and her OM has volunteered to cook for us at FD; Friday snack, Saturday lunch and Saturday evening BBQ, Sunday breakfast. Al has demos arranged for APRS, would like someone for SSTV, and is in need of a source for tents. He needs a contact for emergency officials – it was recommended he contact EC KØHBZ. New business: WV7T is putting together a book of ham radio operator biographies for Russ and Rosie Calaway, and asked anyone interested to sign his contact list. Mike also announced the JOTA in the 3rd weekend of October and he would need someone to assist in using "flag code" with the scouts. Dan KBØPPM noted that he was putting together a tape for the scouts and needed various clips of ham radio in action. KØTER encouraged us to use both the 2mtr and 440 PPFMA repeaters.

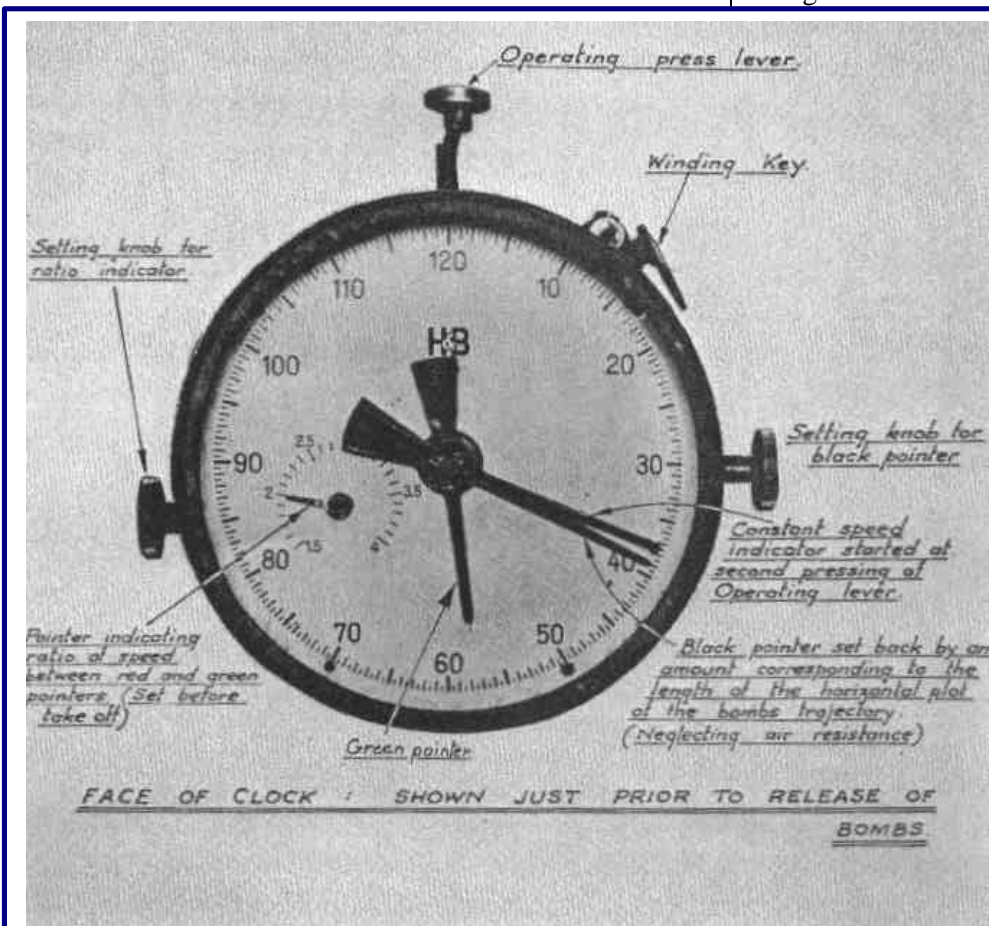


Fig 2: Bombing computer used by X-Gerate fitted Heinkel 111 bombers in Kampfgruppe 100.

NØNTX announced that he has the ARRL CD "Amateur Radio Today" for anyone to borrow. Shelly VE1NOS presented the Hammy Award to Rhoda Anderson KB2BZY, with a nice cover Shelly made to protect it. Congratulations Rhoda! (Rhoda provides our drinks and snacks at each of our club meetings.) KBØB noted the next board meeting would be held at his QTH. After a 20-minute break, an excellent program on digital communications was presented by Dave Allen WBØTAQ (assisted by KØTER.) Meeting adjourned at 8:45 pm. Respectfully submitted by Jerry ADØA for Joanie KCØGMI who was ill.

Board Meeting Minutes, Mar 17, 2003

By KCØGMI Joanie VerDuft, Secretary



The PPRAA Board of Directors met at the home of Bob Wogaman KBØB on March 17th. The meeting was called to order at 7 pm by VP

Tom McDaniel NØNTX in the absence of President NØLNW who was out of town. Board members in attendance were Bob Wogaman KBØB, Rick Brown KØSU, Kate Muniz, KCØEGJ, Aaron Pelouze KD6FLM, Rob Roller N7LV, Jerry VerDuft ADØA and Joanie VerDuft KCØGMI. Also attending were Tom Dawson KCØNRZ and Carolyn Pelouze KCØHPZ. The February board meeting minutes were approved. Rick KØSU noted that, for now, we will continue to meet at the OEM facility. Rob N7LV announced that Tom KCØNRZ had volunteered to take over as Ø-Beat editor. The Board thus appointed Tom to the Ø-Beat editor position and board member effective in April, and expressed sincere thanks and a job well done by Rob N7LV. Rob said he would fill the club's Publicity Chair position, which has been vacant for some time, so he will still be actively involved in PPRAA. Jerry ADØA noted that the 2003 ARRL Rocky Mountain Division Convention in Estes Park (May 30 – June 1) has on-line registration now available at www.hamconcolorado.org and urged everyone who has not yet registered to do so. Bob KBØB noted 6 or 7 club membership renewals. Kate KCØEGJ presented swapfest expense information and bills for donation letters and Documart totaling \$123.55. The Board agreed to reimburse Kate for these expenses. Rick KØSU

volunteered to host the next board meeting. Meeting was adjourned at 7:30 pm. *Respectfully submitted by Joanie VerDuft KCØGMI*

Ham Etc News Briefs

- The FCC is proposing to increase the vanity callsign fee from \$14.50 to \$16.30, effective in fiscal year 2004. The FCC is taking comments through May 5.

Hamfest Horizon

- **May 16 18, 2003:** Dayton Hamvention, Dayton, OH. Visit the web site at <http://www.hamvention.org>
- **May 30 Jun 1, 2003:** Rocky Mountain Division Convention (HamCon), Estes Park. Visit the web site at <http://www.hamconcolorado.org> Contact Jerry VerDuft ADØA, 719-634-8066, ad0a@arrl.net.
- **Jun 14, 2003:** PPRAA Hamfest, Lewis-Palmer High School, Monument. VE testing, forums, raffle prizes! Contact Kate Muniz KCØEGJ for details.
- **Aug 17, 2003:** Denver Radio Club Hamfest, Jefferson Co. Fairgrounds, Golden.
- **Sep 28, 2003:** Boulder ARC Hamfest, Boulder Co. Fairgrounds, Longmont.

ARRL EmComm Seminar Comes to HamCon

From the ARRL Letter, March 14, 2003

Those of you registered for HamCon won't want to miss this. If you're not already registered, now is the time!

ARRL to sponsor emergency communications course seminar in Colorado: The ARRL will offer a free Amateur Radio Emergency Communications course (ARECC) seminar Friday, May 30, in conjunction with the 2003 Rocky Mountain Division Convention in Estes Park, Colorado. The seminar will not include the Level I course itself. This program is designed to explain in greater detail the duties of volunteer certification mentors, instructors and examiners of the Amateur Radio Emergency Communications courses and provide additional information for those considering these volunteer positions. The seminar will be held Friday, May 30, from 10 AM to 2 PM in the Lake Estes Room at the Holiday Inn in Estes Park, Colorado. Seating may be limited. Contact Dan Miller, K3UFG, k3ufg@arrl.org; 860-594-0340; fax 860-594-0259, if you plan to attend. Seminar attendance does not include admission to the convention. For more information on the 2003 Rocky Mountain Division Convention, visit the convention Web site:

<http://www.hamconcolorado.org>.

Public Service Communications

The PPRAA is an ARRL Special Services Club, but it is not an emergency services club itself. The PPRAA supports all amateur radio involvement in public service and emergency communications in any way it can, including reporting activities happening in the region. These columns are based on available knowledge of the editor, and the opinions expressed are not necessarily the opinions of RACES, ARES, Skywarn or any other organization, or their leadership. Logos used with permission.

RACES



<http://www.qsl.net/epcraces/>

VHF Net Tuesdays at 1930 on the 146.76 MHz

CMRG repeater

Les Borst KCØNC, RACES Officer

This past month's training was a refresher for some, new for others, with fire weather training provided. Members received training on the use of the fire weather belt kit, for measuring the most important weather factors around a wildland fire: humidity (wet and dry bulb readings), wind, and wind direction. Members also participated in a cable pulling party to install feedline for the ATV system. April training is not yet announced but will be on the third Thursday at the OEM.

ARES



<http://www.qsl.net/ppares/>

VHF Net Tuesdays at 1900 on the 146.97 MHz

PPFMA repeater

Wes Wilson KØHBZ, EC

NØMIK will present ARES basic MEAT program (Minimum Essential ARES Training); PPARES members are strongly encouraged to attend; however it will be open to all. This'll be at the El Paso County OEM on Apr 12 from 0800 to 1600. Lee Inman KØQED joins staff as AEC for Software Development; Kit Haskins KAØWUC joins as AEC - Technical Coordinator. March of Dimes Walkathon on Apr 26. Contact Wes KØHBZ to volunteer. Cavalier Trail Ride is May 24 & 25. Contact KD6FLM at 597-2503 or kd6flm@aol.com.

Ham Radio Publicity

By N7LV Rob Roller

There's been a lot of publicity lately about ham radio. From the ARRL mpeg video, narrated by Walter Cronkite (himself a ham: KB2GSD), to the 48 sec ditty by Paul Harvey on March 19, to several news articles in several newspapers, ham radio is showing the world its importance in the wake of the terrorist attacks and on the Homeland Security front. Locally, ham radio is prominent in city and county emergency operations plans.

The fact that ham radio is getting noticed more and more means that each of us that support emergency communications should be doing what we can to be ready in case we are called upon to support whatever is necessary. Do simple things like making sure your radios are working and batteries are charged. Listen! If things start getting a little weird, tune to 146.97 for ARES or 146.76 for RACES activities.

And with our troops fighting overseas, we should be prepared for the unexpected. Get involved and take advantage of the training offered by Pikes Peak ARES, El Paso County RACES, Colorado ARES EmComm on-line materials, and the ARRL's emergency communications courses.

Skywarn Training Coming Up In April



There is still one more Skywarn training session scheduled. It's sponsored by El Paso Co. RACES, and is on Apr 17 at 7 pm, at the El Paso Co. OEM, 305 S. Union. This second session is primarily for RACES members. Contact Les Borst KCØNC for details. Skywarn is the weather spotter program coordinated by the National Weather Service. Tom Magnuson of the Pueblo NWS office will teach the class. He has graciously donated his time over the past several years to train us ham radio operators in the skills necessary to collect and feed back basic weather information to the NWS.

Articles and Tech Talk

Improve Your QSL'ing

by WV7T, Mike Anderson

As the Internet has become an indispensable tool in the shack a simple process can save money on QSLing. I have been pursuing WAS-RTTY-QRP and have all states worked at least once. But to get the "Proof-Of-Purchase" certificate and having a small allowance I needed a way to ensure when my QSL goes out another QSL will return in its place. How you ask? E-mail. Sending a short message to the stations I worked to inquire if they send QSL cards, and if so, would they exchange cards and if they required a Self Addressed Stamped Envelope (SASE). I was surprised how many replies I received and equally surprised how many hams said, "skip the SASE". I sent out 53 QSL cards and have 47 states confirmed only 3 more to confirm. For me it seems to work well and I have made several new friends in the process. Give it a try and let me know how e-mailing works for you.

QRP - Then

By KØSU, Rick Brown

Many Hams tend to think of QRP as a relatively new aspect of our hobby. Many of us were running QRP power levels when we started operating, not thinking much about the low power level. I was first licensed in 1962 as WA9FCG. I started operating with a Heathkit "Sixer," a low power six meter AM transceiver.

The Sixer had a super-regenerative receiver that was about as broad as a barn door. The tuning knob turned 180 degrees and covered the full four Megacycles of the six meter band. You do remember Megacycles don't you? I could listen to stations anywhere on the low end without ever touching the knob.

The transmitter for this rig was crystal controlled and ran five watts of plate input power (that is where the B+ was connected). In those days we measured the input power to the final tube or tubes. You remember vacuum tubes, they glowed in the dark and kept you warm on those cold winter nights

when no one was answering your CQ. If you remember AM, you know the output power of the transmitter must have been somewhere around three watts. That definitely put the rig in what we call QRP today.

Just to make matters worse, I was using 100 feet of RG-58 coax (it took a lot of lawn mowing to buy that) to feed a home-brew two element beam. Who knows what the SWR was, the driven element was sort of like a folded dipole that drooped in the middle. The concept of an SWR bridge was a little bit beyond a 16-year-old, not to mention the cost of obtaining one. Looking back on that setup, I was probably lucky if I got one watt of RF to the antenna. I still managed to make a lot of contacts with that rig, and I would really get excited when I worked stations 100 or more miles away.

One summer I scrounged a multi-vibrator power supply so I could put the rig in my dad's car. On our vacation that year through Wisconsin and the Upper Peninsula of Michigan I made three or four mobile contacts. It is a wonder I didn't give up on radio all together, but the magic of being able to talk with someone miles away never seemed to go away.

Thanks to my Elmer and the local Civil Defense organization I was loaned a Gonset Communicator III (the Gooney Box) after a year or so of operating with the old Sixer. This was really a step up in the world of Ham Radio. This rig ran eight watts of input power, and had a superhet receiver. Now I was in business. During the summer before my Senior year in high school I was able to make a couple of hundred contacts around the country because of E-skip. My best DX was K1TOL in Maine. I still have the QSL card, and Lefty is still active on the six meter band. Operating was a lot more relaxed then and everyone was very helpful to a young kid on the band. I suppose that is one of the reasons I always come back to six meter operation. There is a lot of open band space on six meters, and when the propagation is good, it doesn't take much power to work across the country.



Heathkit "Sixer"

messages which are high-priority messages for air and ground stations.

Frequencies to monitor (in the USB mode) include: 4709, 4724, 6712, 6739, 8992, 11175, 11271, 15038 (11175 is a very active frequency most of the time).

Short-wave broadcasts from the Middle East that you can hear with a reasonable antenna include the following. Note that UTC (Universal Time) is 5 hours ahead of EST. Note that because the changing situation in the area these times and frequencies are subject to change; of course checking the frequencies from time to time is your best bet

VHF operators, like QRPers, tend to be a very friendly bunch of folks. I guess that is why I enjoy both of these aspects of the hobby. The two types of operation are similar, with both requiring good operators on both ends of a contact. Even though I understand most of the technical parts of radio these days, the magic of talking to someone across town or across the country is still there. If you aren't having fun, it isn't ham radio. I hope you are having fun with whatever you are doing. See you on the air!!!

Iraq War Frequencies

Rc'vd via E-mail From Tom K5RC

Note: These frequencies have not been verified by the editor.

As the world waits and watches Iraq, if you've got a short-wave receiver with sideband mode (USB and LSB) you can hear certain military communications related to the conflict including many long-distance GHFS (Global HF System) stations including Emergency Action Messages (EAMs) and Skyking

of hearing a broadcast.

Egypt, Radio Cairo on 9900 at 2315 UTC Iran, Voice of the Islamic Republic, Tehran on 9022 at 1030 UTC (also on 9835 and 11970) Iran also on 13730 and 13745 at 1330 UTC.

Iraq, Radio Baghdad on 11787 (varies slightly to 11785) at 2000 UTC. Also check 15265, 15375, 15385, 21470 at 1100 UTC.

Israel, Kol Israel on 6280, 7475, 9435 at 0500 (also on 11605). Israel also on 15640, 17535 and 6220 at 2000 UTC. Also check 1700 UTC on 17545. At 1900 UTC on 11605, 15615 and 17545.

Kuwait (Radio Kuwait) on 11990 kHz at 1800 UTC. Also check 15110 kHz.

Syria, Radio Damascus on 12085 (and 13610 frequently) at 0500 and 2000 UTC.

Turkey, Voice of Turkey, Ankara on 11960 and 12000 at 2100 UTC; on 6020 at 0400 and 2300 UTC.

United Arab Emirates Radio, Dubai on 13675, 15395 at 0020, 1330 UTC; 15395 at 0030; 0200 on 15395 and 15370.

Will Ham Radio Be Shut Down in Wartime?

From the ARRL Letter, March 14, 2003

This question has been asked a number of times in recent years. The ARRL Letter has the answer.

Will Ham Radio Be Shut Down If War Is Declared?

Some amateurs have been wondering if the FCC will shut down Amateur Radio in the event that war breaks out in the Middle East. The short answer is "no."

Just prior to the Gulf War, §214.4(b)(4) of Title 47 of the Code of Federal Regulations was deleted. This section had mandated the closing of all Amateur Radio stations except Radio Amateur Civil Emergency Service (RACES) stations in the event that the president proclaimed a war or national emergency. The last time Amateur Radio was shut down was during World War II, although the FCC continued to give Amateur Radio examinations.

While the Amateur Radio Service will not automatically be shut down if the president invokes the War Powers Act, Amateur Radio licensees must continue to observe any directives the FCC may issue in the interests of national security and of making spectrum available for government use.

The FCC is directed to work in coordination with the National Telecommunications and Information Administration (NTIA) to issue "appropriate rules, regulations, orders and instructions" for use of the spectrum "as may be necessary to ensure the effective use of those portions of the radio spectrum shared by government and non-government users." Amateurs share most UHF allocations with the US government.

Field Day Update (as of March 11)

by VO1NO, Al Penney, Field Day Coordinator

First - mark the following dates in your calendar: Friday 27 June to Sunday 29 June. Don't do anything stupid like plan to get married on that weekend! (Not that getting married is stupid ... it's just that getting married on Field Day Weekend would be a stupid thing to do!!)

[Ed: As of Mar 15, Al has received a tentative "okay" on the use of the field owned by St. Gabriel Church, at the NE corner of Research and Austin Bluffs Pkwy. Still waiting for a final "okay".]

The following people have volunteered to be Band Captains:

SSB Station - Dan Scott, KBØPPM

CW Station: Mike Stansberry, KØTER

Satellite Station: Tom McDaniel, NØNTX

GOTA Station: Mike Anderson, WV7T (Get On The Air station)

VHF/UHF Station: Still Vacant! I need a volunteer!

Kate KCØEGJ and her husband have volunteered to organize food and meals. We plan on the following meals: a snack Friday evening for those setting up; lunch Saturday; BBQ/Potluck Saturday evening; breakfast Sunday; snack Sunday.

There will be a nominal charge for food, but I might be able to talk the Executive into springing for something for the BBQ/Potluck! Does anyone have a small fridge we can use for the weekend?

Two demonstration modes have been confirmed. They are: APRS - Lee Inman, KØQED; ATV - John Roth, NØQJS.

I have sent a request for the Edge of Space Science people to give a static demonstration, and am waiting for a reply. I would like someone to provide another demonstration mode however. Is there anyone into SSTV out there?

I am still looking into tents. I can get canopy tents from Peterson AFB at a cost of \$40.00 for the weekend. They don't have sides, but one would be fine for a mess tent (eating tent). Again, if anyone has leads on good operating tents, drop me a line.

We still have no one for Natural Power. This could be solar power or wind power (or a hand cranked generator!). You are allowed to charge a battery before Field Day, and make 5 QSOs with it. Any volunteers?

Here's an important point - once the location has been confirmed, I'll be ordering a port-a-potty for the weekend. Not the Broadmoor, but it beats squatting behind a bush!

I intend to invite some of the local officials to Field Day, including politicians and emergency officials. I am new to the area however, so I don't know the names of who we should invite. Please send suggestions!

As we get closer to Field Day I'll be looking for volunteers for jobs such as copying the ARRL Field Day message, taking photos of the event, setting up etc.

Next month: A checklist for the band captains.

Pikes Peak Region Ham Radio Event Calendar

April / May 2003 -- Please see Page 2 for Points of Contact

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5 Longmont ARC Hamfest
6	7	8	9 PPRAA Mtg	10	11	12 PPRAA VE Test PPARES Trng
13	14 PPRAA Board Mtg	15	16 MARC Mtg	17 EPCRACES Mtg Skywarn Training	18	19
20	21	22	23	24	25	26 PSE March of Dimes Walkathon
27	28 ZB Deadline	29	30	1	2	3 MARC VE Test
4	5	6	7	8	9	10
11	12	13	14 PPRAA Mtg	15 EPCRACES Mtg	16 Dayton Hamvention	17 Dayton Hamvention
18 Dayton Hamvention	19 PPRAA Board Mtg	20	21 MARC Mtg	22	23	24 PSE Cavalier Trail Ride
25 PSE Cavalier Trail Ride	26 ZB Deadline	27	28	29	30 HamCon!	31 HamCon!

Questions about any event on this calendar? Something missing? Try our web page, or contact a Board Member!

PPRAA Membership Application

Membership Application for the Pikes Peak Radio Amateur Association, Inc. P.O. Box 16521, Colorado Springs, CO 80935-6521	
Date: _____ <input type="checkbox"/> New Member <input type="checkbox"/> Renewal Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Call: _____ Class: N T + G A E Phone: _____ Mbr of ARRL? <input type="checkbox"/> Yes <input type="checkbox"/> No E-mail: _____ Additional Family Members to Join/Renew: Name: _____ Call: _____ Class: _____ ARRL? _____ Name: _____ Call: _____ Class: _____ ARRL? _____ Name: _____ Call: _____ Class: _____ ARRL? _____	In which activities would you like to participate? Field Day <input type="checkbox"/> Demonstrations <input type="checkbox"/> Nets or round tables <input type="checkbox"/> Organize activities <input type="checkbox"/> Teach ham classes <input type="checkbox"/> Full Member \$15: <input type="checkbox"/> Family Membership \$18: <input type="checkbox"/> Over 65 \$10: <input type="checkbox"/> Over 65 Family \$12: <input type="checkbox"/> Associate \$12: <input type="checkbox"/> Ø-Beat Only \$12: <input type="checkbox"/> Donation to Club: \$ _____ Total Enclosed: _____
MAKE ALL CHECKS PAYABLE TO "PPRAA"	
Please indicate how you'd like your Ø-Beat delivered: <input type="checkbox"/> Standard hardcopy via U.S. Mail (Defaults to standard hard copy in the event that NO check boxes are checked) <input type="checkbox"/> As a PDF file attachment via e-mail, to help save a few bucks <input type="checkbox"/> I'll save the club a few bucks and download it from the Web!	
Circle your interests ⇒ HF / V/UHF / FM / SSB / Digital / DX / Contests / Technical / Hardware / Other _____	
New and renewing members must submit a completed application form along with your check to the Treasurer. Please Type or Print Clearly!	

ALL NEW MEMBERSHIPS AND RENEWALS WILL BE PRORATED TO EXPIRE IN DECEMBER!!

RadioActivities!



Lunch Bunch

The **Lunch Bunch** is being postponed for a few months due to, well, just ... things. Schedules have changed, people can't make it, etc. So we'll

hold off for a few months. Stay tuned! Contact Moe WBØRTF with any questions!!

Dits and Bits

➤ **For Sale:** From an estate: Kenwood TS-820, SM-200 monitor, AT-200 antenna tuner, w/manuals, very good condition, \$550. Harvey LeCato W1JU, 592-4607 (H) or 599-7070 (W), harvey01@adelphia.net.

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